

Chapter 1: Introduction

The Sacramento-San Joaquin River Delta is a unique place of economic, environmental, historic, and cultural significance. The land and water resources of the Delta support significant agricultural and recreation economies, and the Delta also has an important role as an infrastructure hub for water, energy, and transportation. The region's rich history boasts of bustling, river-based commerce before the automobile age, and its cultural uniqueness includes the only rural town in America built by early Chinese immigrants. As the largest estuary on the west coast of the Americas, the Delta also is a place of striking natural beauty and ecological significance that is struggling with serious environmental degradation problems. Although surrounded by growing cities, the Delta remains a highly-productive agricultural area with rural charms, landscapes, and waterscapes not found elsewhere in California.

In recent years, there has been great concern over increasing environmental degradation in the Delta and over court decisions that reduced the quantity of water delivered to southern California through the state and federal water project intakes in the south Delta to protect endangered fish. Combined with additional concerns about the stability of the Delta's levee system, these concerns led the California legislature to pass the Delta Reform Act of 2009. The Act created the Delta Stewardship Council and charged it with developing a Delta Plan to achieve the coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem."

Recognizing the potential impact of the Delta Plan on the people and economy of the Delta, the Delta Reform Act stated that the coequal goals of water supply reliability and restoring the Delta ecosystem "shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." Among the measures to address this goal, the Delta Protection Commission was tasked with developing this Economic Sustainability Plan to inform the Delta Stewardship Council's development of the Delta Plan.

The Legislature established the following guidelines for the Economic Sustainability Plan in the Delta Reform Act of 2009.

The economic sustainability plan shall include information and recommendations that inform the Delta Stewardship Council's policies regarding the socioeconomic sustainability of the Delta region. (b) The economic sustainability plan shall include, but not be limited to, all of the following:

- (1) Public safety recommendations, such as flood protection recommendations.*
- (2) The economic goals, policies, and objectives in local general plans and other local economic efforts, including recommendations on continued socioeconomic sustainability of agriculture and its infrastructure and legacy communities in the Delta.*
- (3) Comments and recommendations to the Department of Water Resources concerning its periodic update of the flood management plan for the Delta.*
- (4) Identification of ways to encourage recreational investment along the key river corridors, as appropriate.*

Since a key purpose of this Economic Sustainability Plan is to inform the Delta Plan under development by the Delta Stewardship Council, this report analyzes the impact of key policies

being considered for the plan on the economic sustainability of the Delta. Many of the most significant proposals for the Delta are being developed in the Bay Delta Conservation Plan (BDCP). The policy proposals can be grouped into four categories: 1) water conveyance, 2) habitat creation, 3) levees, and 4) land use regulation. The report also considers many aspects of economic sustainability in the Delta that are unrelated to these water policy proposals including economic development recommendations in the 2008 Delta Vision Strategic Plan.

Thus, in addition to the goals stated in legislation, the following goals have also been established as critical to developing information and recommendations to support economic sustainability in the Delta.

- Provide a thorough analysis of the baseline and trends for key sectors of the Delta economy.
- Identify the linkages between the Delta economy and the regional and state economy.
- Provide the most complete available assessment of the condition of Delta levees.
- Develop a vision for economic sustainability of Delta Legacy Communities.
- Create a detailed model of the effects of water policy proposals on Delta agriculture.
- Assess the effect of water policy proposals on the recreation and tourism economy, other economic sectors, and key Delta infrastructure.
- Integrate the findings into a general set of economic sustainability recommendations and strategies for the Delta.
- Integrate the findings into a specific set of recommendations on the issues under consideration by the Delta Stewardship Council for inclusion in the Delta Plan.

Many of these goals involve new research and analysis to support Delta decision making. The last two goals integrate these findings into specific recommendations for policy and economic development and make up the Economic Sustainability Plan.

In order to be adopted into the Stewardship Council's Delta Plan, the recommendations in the Economic Sustainability Plan must be consistent with the coequal goals of improving water supply reliability and protecting, restoring, and enhancing the Delta ecosystem. The legislature also stated that the "coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." Thus, the Economic Sustainability Plan can provide important guidance on evaluating the degree to which proposed actions to address the coequal goals support or conflict with the objective of protecting and enhancing the Delta.

The concept of economic sustainability and the objective to "protect and enhance the unique cultural, recreational, natural resources, and agricultural values of the California Delta as an evolving place" can be interpreted in different ways. In economic terms, there is near consensus that a minimum requirement is to maintain the economic value of the entire Delta economy in the future. The Fifth Staff Draft of the Delta Stewardship Council's Delta Plan uses a stronger definition of economic sustainability where growth in one sector is not a substitute for deterioration in another area. Specifically, the Fifth Staff Draft Delta Plan defines performance measures for economic sustainability as maintaining or increasing gross revenues in each of three key sectors: agriculture, recreation, and ecotourism/agritourism. In addition, there is broad agreement that this objective requires the protection of the cultural and historical heritage and the long-term economic viability of the Delta's historical Legacy Communities.

Limitations of the Plan

While the list of goals is lengthy, there are a few related issues that are outside the scope of this assessment. As an economic sustainability plan, the focus of the report is the long-run prospects of ongoing economic activities, not short-term impacts from investments or events. In addition, the assessment is limited to the economic impacts in the Delta region and the impact of activities that originate or primarily take place within the Delta. Thus, it is important to emphasize the following two limitations.

1. *The report does not assess short-run economic impacts of proposed capital spending.*

Many of the policy proposals evaluated in the report—including levee upgrades, isolated water conveyance facilities, and habitat restoration projects—involve millions or billions of dollars in capital investment. The construction activity for these investments would create a substantial short-run burst of economic activity in the Delta region, creating local jobs and income. Although these short-run impacts are not part of our economic sustainability assessment, other reports may address these issues in the future.¹ We caution readers that the regional economic impacts of a capital investment are not necessarily proportional to the size of the expenditure, as different projects have very different cost compositions, varying levels of local expenditures, and therefore highly variable regional impacts. For example, levee improvements could be designed and constructed with expertise and equipment inside the Delta, whereas a larger share of spending for design and equipment needed for complex, isolated conveyance tunnels would necessarily occur outside the Delta. In addition, the construction process itself would disrupt traffic and existing economic activity in the Delta in complex ways that have not been sufficiently described.

2. *The report is not a comprehensive cost-benefit analysis of Delta water conveyance options.*

New water conveyance facilities are the most significant and controversial proposal for the Delta. As the work plan for this project was developed, the main proposal in the BDCP was a 15,000-cfs tunnel conveyance, but the process was being opened up to consider a much broader variety of options to improve the reliability of conveyance. The 15,000-cfs tunnel remains the leading proposal and is the only alternative to through-Delta conveyance examined in this report due to the infeasibility of analyzing so many alternatives and the lack of detailed descriptions for the alternatives. Some qualitative inferences can be made about different size conveyance based on the 15,000 cfs analysis, but more detailed analysis is not feasible at this time. In addition, all of the water conveyance proposals have costs and benefits that extend far outside the Delta. This report assesses the effect of the tunnel conveyance on the Delta economy, which is an important input to a comprehensive cost-benefit analysis with a statewide focus. In a few places, out-of-Delta impacts are considered when they have implications for the

¹ At the September 27, 2011 BDCP meeting, “Employment Impacts for Proposed Bay Delta Water Conveyance Tunnel Options” was presented. The analysis is reasonable, and the presentation includes the appropriate qualifications and caveats, just as this report is stating the limitations up front. The presentation did not include impacts for alternative options such as large levee upgrades, investments in alternative water supplies such as efficiency improvements, water recycling, and desalination. In addition, the presentation does not consider the negative employment impacts of the substantial increase in water rates this project would create.

http://baydeltaconservationplan.com/Libraries/News/Employment_Impacts_for_Proposed_Bay_Delta_Conveyance_Tunnel_Options.sflb.ashx

operation of in-Delta assets such as water conveyance that could have important implications for the Delta economy.

3. *The report is not a comprehensive cost-benefit analysis of ecosystem improvement and restoration proposals.*

The intrinsic value of a healthy Bay-Delta estuarine ecosystem is high and a restored ecosystem would also enhance some market economic values outside the Delta, such as commercial and sport salmon fishing. These are values that would be incorporated into a comprehensive cost-benefit analysis of ecosystem measures, but are outside the scope of our analysis on the Delta economy.

With respect to these last two limitations, comprehensively evaluating the statewide costs and benefits of proposed water supply infrastructure and ecosystem restoration proposals is not the role of the Delta Protection Commission or the Economic Sustainability Plan (ESP). It is the role of the agencies that will make the decisions about what goes into the Delta Stewardship Council's Delta Plan. This includes the Delta Stewardship Council itself as well as the state and federal agencies involved in developing the Bay Delta Conservation Plan (BDCP). At this point, neither of the draft Delta Plan or the working groups of the BDCP contains any plans for comprehensive benefit-cost analysis to inform decision making.² There are many guides to conducting such an analysis, including, but not limited to, the Department of Water Resources' Economic Analysis Guidebook (2008).³ The analysis in the Economic Sustainability Plan could be used as a component or first step towards this broader analysis.

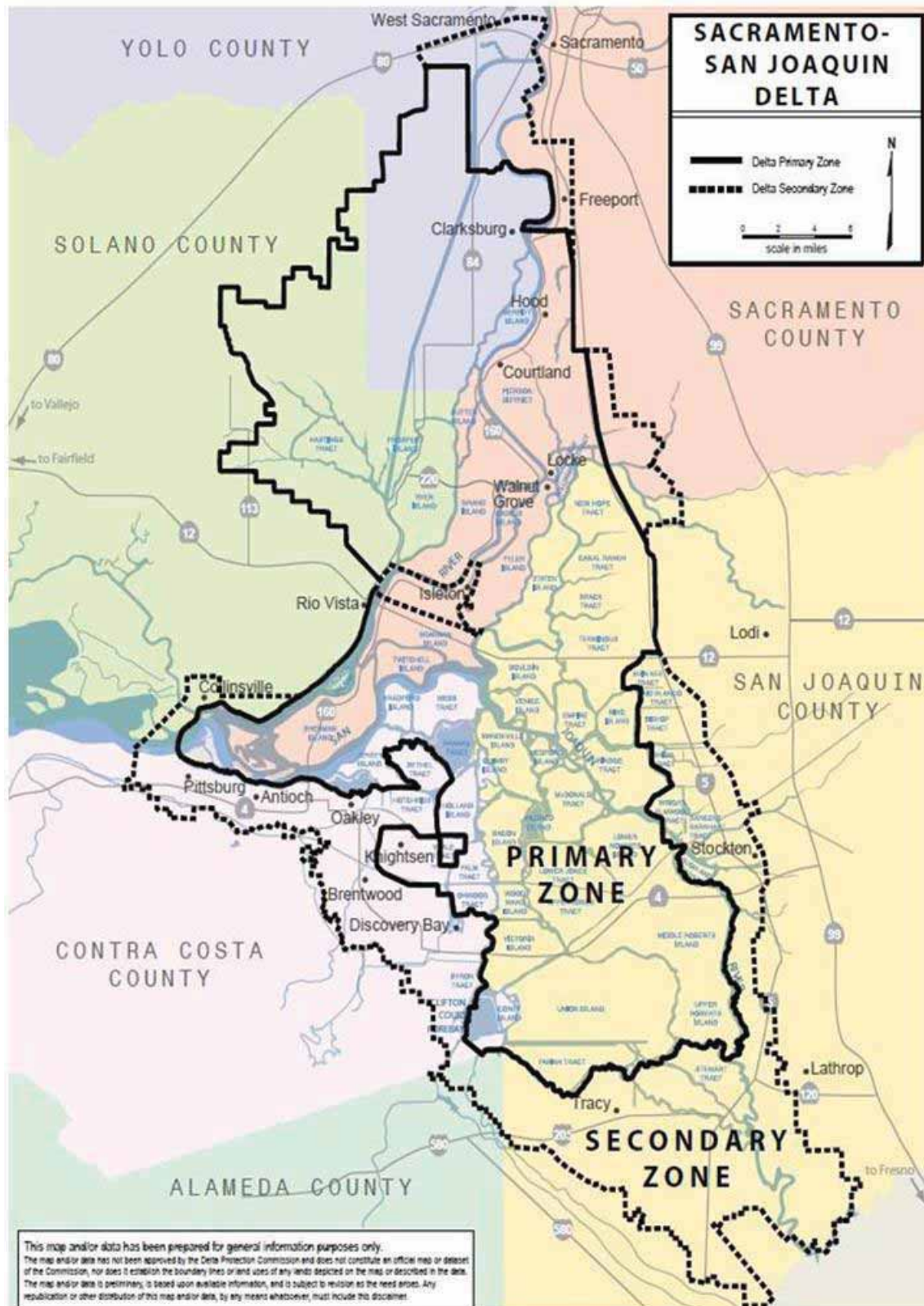
Geographic Focus of the Study

The boundaries of the Legal Delta are shown in Figure 1. The Delta Protection Act of 1992 defined the Delta boundaries including the Primary and Secondary Zone and created the Delta Protection Commission, charging it with developing a Land Use and Resource Management Plan for the Primary Zone. The majority of the Delta's 738,000 acres of land is in the rural and agricultural Primary Zone. The population of the Primary Zone is approximately 12,000 and has remained steady in the nearly 20 years since the passage of the Delta Protection Act.

² In response to a question at the September 27, 2011 BDCP meeting, Deputy Resources Secretary Meral said a more comprehensive economic analysis was beginning, although it was unclear whether it would be a full cost-benefit analysis and what alternatives would be analyzed. At this time, there is no related BDCP workgroup or official announcement of this project, its scope and timeframe.

³ California Department of Water Resources (CDWR). 2008. *Economic Analysis Guidebook*. http://www.water.ca.gov/economics/downloads/Guidebook_June_08/EconGuidebook.pdf.

Figure 1 Map of the Primary and Secondary Zones of the Sacramento San Joaquin Delta



Source: Delta Protection Commission. Accessed 2011-06-30

The Legal Delta including both the Primary Zone and Secondary Zone, contains significant portions of five counties, Contra Costa, Sacramento, San Joaquin, Solano, and Yolo, and a small rural corner of Alameda County. The Delta includes parts of several large cities including Antioch, Pittsburg, Stockton, Sacramento, Tracy, and West Sacramento. The Legal Delta has a population of 571,000, according to the 2010 Census, which has increased by about 200,000 people—more than 50 percent—in the 20 years since the 1990 Census. All of the population growth, and virtually all of the Delta’s urbanized land, is located within the Delta’s Secondary Zone.

The Delta’s economy, like its population, is primarily urban and service oriented. However, the Delta Reform Act of 2009 and the Delta Protection Act of 1992 are primarily concerned with the natural resources of the Delta and the economic activity sustained by those resources such as agriculture and outdoor recreation. In addition, the resources of the Delta support significant water, energy, and transportation infrastructure that serve the Delta, regional and state economies, and an important commercial and recreational salmon fishery throughout the state.

Chapter 2 of this report gives an overview of the entire Delta economy and socio-economic trends. Detailed study is reserved for the resource-related industries and sectors that could be significantly affected by the Delta Reform Act: agriculture, recreation and tourism, and the infrastructure services that depend on the levees, land, and water resources of the Delta. These resources are concentrated in the Primary Zone. Despite the urban nature of the Secondary Zone, it has important economic linkages with the Primary Zone and its resources.

The Legal Delta, both primary and secondary, includes portions of several counties and cities and does not conform to the usual boundaries that define economic data and models. This creates several challenges for this project, and an effort was made to approximate the Legal Delta boundaries with Census block groups, tracts, zip codes, and geocoded establishment data when available. However, the boundaries of what constitutes the Primary Zone or a given community can change based on the data source being utilized. The report authors have tried to be clear throughout the report regarding the definitions, but readers should be aware that variations in data reported reflect the differences in data sources available for a rural area that spans five counties.

Organization of the Report

There are three parts of the report that follow this Introduction. Part One presents critical background and overview information. Part One includes a broad overview of economic and demographic data for the Delta; an assessment of the current state of Delta levees, emergency response, and financial resources available to improve the levees; a very brief review of Delta ecosystem issues, and a review of key laws and land-use plans and how they interact in the Delta. Part Two analyzes specific industry sectors in the Delta, the baseline and trends of these industries, and the expected effects of various policy proposals. Part Three discusses integrative, cross-cutting issues including a chapter that explores the future of Legacy Communities. The final chapter in Part Three concludes the report by presenting a set of recommended strategies and policies to support economic sustainability in the Delta.